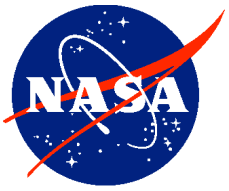

National Aeronautics and
Space Administration

NOT MEASUREMENT
SENSITIVE

NASA-STD-2805I
effective date 17 May 2005

MINIMUM HARDWARE CONFIGURATIONS

NASA TECHNICAL STANDARD

FOREWORD

This standard is approved for use by NASA Headquarters and all NASA Centers and is intended to provide a common framework for consistent practices across NASA programs.

The material covered in this standard is based on the consensus judgment of the NASA Chief Information Officers (CIO) Board and the NASA IT Investment Council. The purpose of this standard is to define the current minimum desktop hardware configuration that will be used by NASA to support interoperability. Desktop hardware below this minimum configuration may be used in areas where interoperability is not required.

Requests for information, corrections, or additions to this standard should be directed to the John H. Glenn Research Center at Lewis Field (GRC), the Basic Interoperability and Desktop Standards Group, Code 7100, MS 142-5, Cleveland, OH, 44135 or to *desktop-standards@grc.nasa.gov*. Requests for general information concerning standards should be sent to NASA Technical Standards Program Office, ED41, MSFC, AL, 35812 (telephone 256-544-2448). This and other NASA standards may be viewed and downloaded, free of charge, from our NASA Standards Homepage: *http://standards.nasa.gov/*.

Patricia L. Dunnington
Chief Information Officer

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MINIMUM HARDWARE CONFIGURATIONS

1. SCOPE

1.1 Purpose. This Standard defines the current minimum desktop hardware configuration that will be used by NASA to support interoperability. These specifications apply to all NASA desktop and portable systems that are required to support interoperability.

1.2 Scope. Desktop hardware below this minimum configuration may be used in areas where interoperability is not required. However, Agency workstations used for interoperability must meet the criteria specified in section 3.3 of this document.

1.3 Waivers. The waiver process set forth in NPR 2800.1, paragraph 2.2.4, applies to this standard. The desktop standards group, in cooperation with the Chief Technical Officer, will continue to process waivers on behalf of the Principal Center for Workgroup Hardware and Software.

2. ACRONYMS AND DEFINITIONS

2.1 Acronyms and Definitions

2.1.1	RAM	Random Access Memory
2.1.2	ODIN	The Outsourcing Desktop Initiative for NASA
2.1.3	GP	ODIN General Purpose Desktop
2.1.4	GP3	ODIN General Purpose Laptop or Portable

2.2 Definitions

2.2.1 Minimum Workstation to Support Basic Interoperability. Workstations that support basic interoperability are defined by being networked, and by having users who exchange information electronically, including those users that perform any or all of the activities encompassed in the minimum office automation software suite defined below.

2.2.2 Minimum Workstation Hardware Configuration. This is the minimum interoperable workstation hardware configuration that may be retained by a NASA organization. (The CIO at each Center is empowered and accountable for determining the performance/cost assessment for configurations that exceed the minimum hardware configuration and its associated cost. The Center CIO will also ensure that obsolete workstations are excessed on a one-for-one basis as new workstations are introduced.)

2.2.3 Minimum Interoperability Software Suite. The Minimum Interoperability Software Suite, is defined in NASA-STD-2804I, "*Minimum Interoperability Software Suite*."

3. GENERAL REQUIREMENTS

3.1 NASA Integrated Information Technology Architecture: Architectural Compliance Requirements.

NASA has baselined, approved, and implemented an initial NASA Integrated Information Technology Architecture[1]. The architecture is predicated on:

- the selection of standards for a broad and cost-effective infrastructure using commercial off-the-shelf and well-supported open source products as much as possible
- interoperability both within and external to NASA
- flexibility for future growth
- consistency with generally accepted consensus standards as much as feasible.

Among these objectives, interoperability is one of NASA's most critical issues related to information technology.

At times, it is in NASA's best interest to specify commercial products as standards for an interoperable implementation of a particular set of related and integrated functions. In those instances, there are often other embedded functions or proprietary extensions within those products whose use may create higher-level interoperability conflicts when embedded in an application system that transcends basic interoperability**. For that reason, NASA Centers and programs are advised to apply appropriate caution when using proprietary or non-standard extensions, features and functions of hardware or software that go beyond the standard functionality.**

3.2 Computing Platforms. This standard recognizes that NASA is a diverse agency with independent computing requirements. NASA will continue to support three desktop computing platforms: PC, Macintosh, and UNIX.

3.3 Performance-Based Interoperability. This standard establishes the desktop system hardware configurations that will support the agency-wide interoperability software suite as defined in NASA-STD-2804.

The NASA ODIN contracts establish a benchmarked performance standard for each set level (based in part on elements of the NASA software suite). An independent third-party testing and analysis company has been contracted to evaluate and provide performance ratings for commercially available systems, including systems submitted by ODIN vendors or by NASA on a quarterly basis. Desktop systems that meet or exceed the performance and feature specifications of the current ODIN contract GP seat level Attachment R, for the Center and fiscal quarter in which they are procured, are deemed acceptable for the minimum interoperable workstation. Laptop or portable systems that meet or exceed the performance and feature specifications of the current ODIN contract GP3 seat level Attachment R, for the Center and fiscal quarter in which they are procured, are deemed acceptable for the minimum interoperable workstation.

This standard will accept as a minimum, any system which, when procured, met or exceeded the existing GP (or GP3, for a portable or laptop) performance specification as defined in the ODIN contract or as modified by the individual Center Delivery Order, has a CD-ROM drive (minimum 24x, or minimum 8x if DVD-ROM), has multimedia audio capability, has a minimum of 10 GB internal hard disk capacity, has a network interface or modem, supports a minimum of SVGA display capability, and has a minimum of 256 MB of RAM[2]. A 3.5" floppy disk drive is no longer required. Instead, on new systems, USB ports are required, and a small USB-based

[1] NASA-STD-2814A, *NASA Integrated Information Technology Architecture—Technical Framework*
[2] When using multiple virtual machines on a single computer, an additional 256MB of RAM should be present for each virtual machine in use.

removable storage device of not less than 128MB capacity is required to provide removable storage.

The compliance date for the above criteria is defined as the same for the Windows XP and Mac OS X operating systems, as specified in NASA-STD-2804I, in terms of their respective platforms.

4. REVIEW AND REPORTING REQUIREMENTS

4.1 Interoperability Reporting. Each Center CIO will establish the necessary processes and tools, both manual and automated, to report on an annual basis to the NASA CIO the hardware and software configuration of all workstations at their respective Centers. These data will contain sufficient information to ascertain if the workstation supports NASA employees or is Government-furnished equipment to a contractor; whether the equipment is required to be interoperable; and a description of the hardware architecture/environment. The report will specify the number of NASA employees that do not have access to interoperable workstations.

4.2 Minimum Hardware Configurations Review Reporting. This standard will be reviewed and updated on an as-required basis, not to exceed 6-month intervals. Minimum workstation hardware configurations will be updated as required.

5. DURATION

5.1 Duration. This standard will remain in effect until canceled or modified by the NASA CIO.

6. SUPPORTING DOCUMENTS

6.1 Supporting Documents. Supporting documents for this technical standard can be found at the following URL: *http://desktop-standards.grc.nasa.gov/*.